Course Name:
Data Science
Duration:
5 Days
Course outline:

Day-1

- The Data Science Ecosystem: From Files and SQL to Big Data and IoT
- Introduction to Python- type, syntax, functions, lambdas, list comprehensions
- Statistical formulae and must knows
- Variance, Covariance, Corerlation
- Points, Locus, Lines, Polygons & Linear Algebra
- Data Structures for Data Sciences- Panel Data, DataFrames, DataSets, Structured and Unstructured data

Day -2

- Centroid Theorems, Clusters, Central Limits, Graph Theory
- Introduction to Numpy and Set Theory
- Discrete and Continuous Mathematics, Matrices and Vectors
- Visualizing the Data- Matplotlib and seaborn
- Types and graphs and what to observe

Day - 3

- Data Consumption and Cleaning with Panel Dataframes
- File formats- CSV, TSV, JSON, Excel
- SQL ops with DataFrames- merging and joining data
- Probability and Game Theory
- Problem solving techniques- Divide & Conquer, Greediness

Day - 4

- Combinatorics, Series and Propagation
- Distributions- Gaussian, Normal, Probabilistic
- Hypothesis Formation and Testing with Chi-squared metrics
- Observing and Managing skewed data and outliers

Day - 5

- Combining all above- Introduction to end to end data science
- Building an Algorithm
- Optimizing an Algorithms by reducing errors, Mean Absolute and Squared Errors, Accuracy, Precision and Recall
- Cross Validation Score and Types
- Known adjustments and manipulations
- Introduction to Machine Learning- Classification and Regression problem types